554,024

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(54) Title: NON-INVASIVE LEFT VENTRICULAR VOLUME DETERMINATION
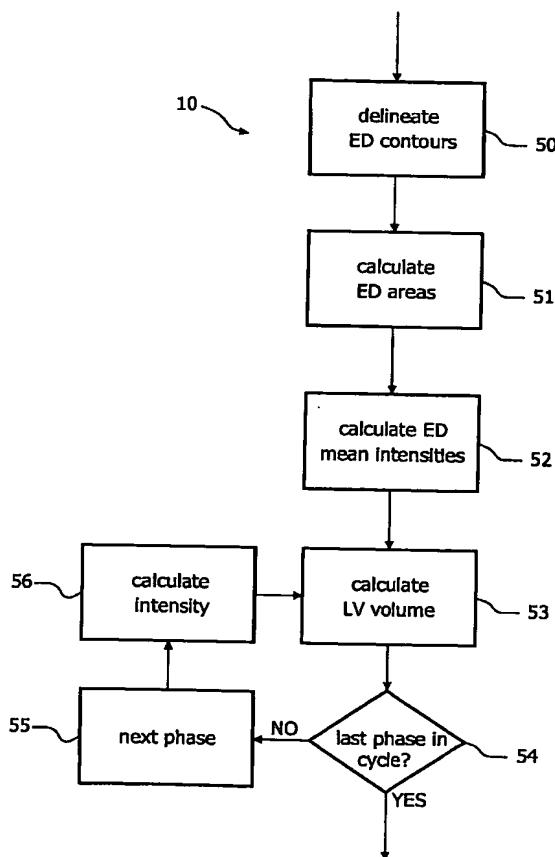
(57) Abstract: A method of and a computer readable medium comprising a program for calculating total left ventricular (LV) volume during a cardiac cycle. The LV volume is estimated using only endocardial contours in a cardiac 3D image that was acquired at end diastole (ED), i.e. the moment at which the heart is fully relaxed. These contours are manually specified or (semi-)automatically derived. Based on these contours and on the pixel intensity in all other images, the LV volume is estimated based on intensity variations within the area enclosed by the contours (ED LV blood pool). These variations are proportional to the change in size of the ventricle. Hence ventricle volume and other derivable cardiac functionality parameters as well as the phase in the cardiac cycle are derived. The 3D image is previously to the method captured by means of a device for imaging inside parts of a mammal body, such as Magnetic Resonance (MR), Computer Tomography (CT), Nuclear Medicine (NM) or Ultrasound (US) devices.

Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

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